Co-ops explore career options, gain valuable experience

By Jenny R. Gruber

Through cooperative education, college students gain work experience in their fields of study by taking time off from school to work full time at a variety of corporations and agencies.

JSC's Cooperative Education Program began in March 1961. Currently, Co-op Program Manager Bob Musgrove runs the program, with the assistance of Sharon Evans. According to the co-op Web page (http://www.jsc.nasa.gov/coop/jsc-coop.html), there are about 150 students in the program representing 45 schools. The majority of co-ops are engineering majors, but there also are students from other technical, scientific and business-related fields.

John Osborn, a computer science and astronomy double-major at the University of Texas, is working in the Cargo Integration and Operations Branch training the Assembly and Checkout Officer Flight Control Team on Russian systems, like the Zarya and Progress spacecraft. Osborn says, "The JSC co-op program gives university students a chance to serve in a project larger than themselves as a member of a highly qualified team."

Co-ops at JSC have a wide selection of projects to choose from. Current co-op projects include:

- Making a financial systems reference guide for budget analysts;
- Designing the first console display unique to the Flight Director's Office;
- Working on a classical flight control system for X-38 Vehicle 201, including development of nonlinear 6-degree-of-freedom simulations using the Spacecraft Engineering Simulator and linear analysis tools used to assess the stability and control characteristics of the vehicle, and
- Designing, analyzing, and testing the TransHab bladder seal interface for the next development unit;
- Developing and employing mission planning software to assess performance for trans-Mars injection.

Both students and employers benefit from the co-op program. Ron Sostaric is an aerospace engineering major at Georgia Tech and a co-op in Aeroscience and Flight Mechanics, Advanced Mission Design. Sostaric is working on running entry simulations for landing a manned vehicle on Mars and helping to tune the guidance in order to minimize the landing footprint. According to Sostaric, the co-op program "is a worthwhile and beneficial program to both the participants and the permanent employees at the center. Many divisions are used to working with co-ops and have significant expectations of them. The co-op experience really helps students put school in perspective in terms of their careers. For some of us, it is a chance to fulfill a lifelong dream of being able to contribute to the nation's space program and exploration of the universe."

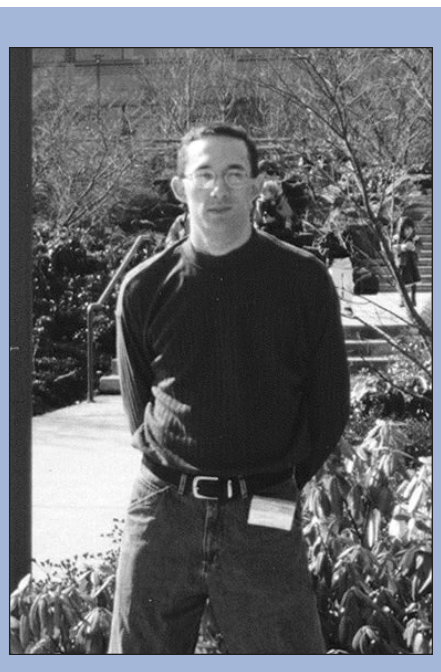
> ***I can't imagine a job where it's not common to run around in a spacesuit, fly on the KC-135, or swim in the Neutral Buoyancy Lab... This program was the best decision I've made so far in my life.***
>
> – Jennifer Glassley

Jennifer Sheppard, an aerospace engineering major at the University of Washington, is working with the orbit flight dynamics officers in the Flight Design and Dynamics Division, Orbit Flight Dynamics Branch. Sheppard believes that co-oping with NASA is a "wonderful opportunity" and says, "It won't be too long before most or all students getting engineering degrees will have co-op experience as part of their education. I figure that it's better to be on the crest of the wave than to be left behind."

Co-oping is a serious opportunity for students to explore career options, but it can also be enjoyable and rewarding. Jennifer Glassley, an electrical engineering major at Purdue University working as the communications/video project engineer for NASA's new technology spacesuits, sums up her experience as a co-op: "The co-op program has provided me with so many great experiences. I had the opportunity to be a field test project lead, as well as the lead electrical engineer for many other projects. I never would have imagined that I'd be a project engineer so early on in my career."

Most co-ops are very satisfied with their positions, and many agree that co-oping at JSC is even more exciting than they thought it would be. Angie Villar, a business management major at Texas A&M University, is working in Human Resources. Her projects include coordinating on-site training courses for employees, assisting the coordination of Russian expatriation training, and coordinating activities for the International Space School Foundation. According to Villar, "As a business major, I never expected to work in such a unique environment, but co-oping at JSC has given me the opportunity to be exposed to things I never dreamed of-an opportunity I am truly grateful for." ■

A number of college students spent their summer co-oping at JSC where they gained valuable work experience in their fields of study.



NASA scholarship recipient launches career

Keith Kelly, son of JSC's Albert Kelly, a contracting officer's technical representative for the training systems contract, is well on his way to a promising career in computer science, thanks partly to the NASA Scholarship Program.

Keith Kelly was named a NASA scholarship recipient in 1995 and with a diploma from Friendswood High School in hand, as well as honors from area science and engineering fairs, he embarked on a new phase of his life at nearby Rice University.

After four years of concentrated study and side jobs with various software and Web design companies, Keith Kelly graduated from Rice University in May with a degree in electrical engineering. He's since begun another new phase in his life – this time among the tall fir trees and snow-capped mountain vistas of Seattle, Washington, where he's joined the ranks of Microsoft Corporation as a software developer.

"The NASA scholarship has been an encouraging reminder each year of my real reasons for working so hard in school," said Kelly in a thank you letter to NASA's Business Management Office. "The goal isn't just to make the grade, but to learn for the sake of self-betterment, and to be able contribute to the world in some positive way." ■

Keith Kelly, a 1995 NASA Scholarship recipient, stands in front of Microsoft Corporation's headquarters building in Redmond, Washington, where he has started his new career in software development.